Application No. 09/815,646
Art Unit 3626

## Claim Listing

Claims 1-7 (canceled)

Claim 8 (currently amended):   A method for determining an overall level of confidence for medical clinical conclusion comprising the steps of:

  a. storing a plurality of medical clinical conclusions;

  b. storing a plurality of medical essential elements;

  c. ~~for each medical clinical conclusion, storing a plurality of membership functions, wherein each membership function associates a medical essential element with a medical clinical conclusion~~ selecting at least one medical essential element from the plurality of medical essential elements and selecting one medical clinical conclusion from the plurality of medical clinical conclusions;

  d. generating a first confidence parameter representing a degree of relationship between ~~an~~ the medical essential element and ~~associated~~ the medical clinical conclusion;

  e. ~~storing a plurality of impact parameters, wherein each~~ generating a first impact parameter representing ~~impact parameter associates~~ a weight of a medical essential element pointing toward a medical clinical conclusion;

  f. ~~selecting at least one medical essential element from the plurality of medical elements and selecting the associated medical clinical conclusion;~~

  g. ~~generating a first impact parameter corresponding to the selected medical essential element and the selected medical clinical conclusion;~~

  [[h.]]f. generating a second impact parameter corresponding to the selected medical clinical conclusion;

  i. ~~generating a first confidence parameter corresponding to the selected medical essential element and the selected medical clinical conclusion;~~

  [[i.]]g. generating a second confidence parameter corresponding with the selected medical clinical conclusion; and

  [[j.]]h. generating an overall confidence parameter for the selected medical clinical conclusion as a ratio of a first product of the first impact parameter and the first confidence parameter to a second product of the second impact parameter and the second confidence parameter, wherein the second product represents a best-case scenario for the medical clinical conclusion.

6

Application No. 09/815,646
Art Unit 3626

Claim 9 (canceled):

Claim 10 (withdrawn):   A method for evaluating a medical clinical conclusion comprising the steps of:

(a) storing at least one medical essential element;

(b) storing at least one medical rule, wherein each medical rule associates a medical essential element with a clinical conclusion and at least one of a membership confidence function and an impact parameter;

(c) receiving at least one medical claim item, wherein each medical claim item is associated with a medical essential element and a date parameter;

(d) sequencing the at least one medical claim item as a function of the associated date parameter;

(e) segmenting the at least one medical claim item into at least one chronological segment, wherein each chronological segment includes at least one medical claim item and is associated with a clinical significance; and,

(f) for each chronological segment determining a total membership confidence value with respect to the clinical conclusion based upon the at least one medical rule.

7

Application No. 09/815,646
Art Unit 3626

Claim 11 (withdrawn):   A method for evaluating a medical clinical conclusion comprising the steps of:

(a) storing at least one medical essential element;

(b) storing at least one medical rule, wherein each medical rule associates a medical essential element with a clinical conclusion and at least one of a membership confidence function and an importance parameter;

(c) parsing at least one medical record, which includes a plurality of phrases, to generate at least one medical claim item, wherein each medical claim item is associated with a medical essential element and a date parameter;

(d) sequencing the at least one medical claim item as a function of the associated date parameter;

(e) segmenting the at least one medical claim item into at least one chronological segment, wherein each chronological segment includes at least one medical claim item and is associated with a clinical significance; and,

(f) for each chronological segment determining a total membership confidence value with respect to the clinical conclusion as a function of at least one medical rule.

Claim 12 (withdrawn):   The method according to claim 11, wherein step (c) further includes the steps of:

(d) storing at least one phrase element, wherein each phrase element is associated with a medical essential element; and,

(ii) for each of the plurality of phrases in the medical record, locating a matching phrase element.

Claim 13 (withdrawn):   The method according to claim 12, wherein step (e) further includes the steps of:

(d) storing a at least one chronological rule, wherein each chronological rule associates an essential element with a change in a clinical segment; and

(ii) evaluating the medical essential element associated with each medical claim item using a chronological rule to determine at least one segment point.

8

Application No. 09/815,646
Art Unit 3626

Claim 14 (withdrawn):   The method according to claim 12, wherein step (f) further includes the steps of:

> (d) based upon the at least one medical rule calculating a sum of membership functions multiplied by an impact parameter with respect to the medical clinical conclusion for each medical item; and,

> (ii) dividing said sum by a sum of an importance parameter associated with each medical item.

Claim 15 (withdrawn):   A system for evaluating a medical clinical conclusion, comprising:

> a database for storing medical essential elements; a database for storing at least one medical rule, wherein each medical rule associates a medical essential element with a clinical conclusion and at least one of a membership confidence parameter and an importance parameter; means for receiving at least one medical record, wherein each medical record includes a plurality of phrases; a processor, wherein the processor is adapted to:

> > (a) parse the at least one medical record to generate at least one medical claim item, wherein each medical claim item is associated with a medical essential element and a date parameter;

> > (b) sequence the at least one medical claim item as a function of the associated date parameter;

> > (c) segment the at least one medical claim item into at least one chronological segment, wherein each chronological segment includes at least one medical claim item and is associated with a clinical significance; and,

> > (d) calculate a total membership confidence value with respect to a clinical conclusion as a function of at least one medical rule.

Claims 16-18 (canceled)

Claim 19 (amended) A method for determining an overall level of confidence for a medical clinical conclusion comprising:

> selecting a medical clinical conclusion from a plurality of medical clinical conclusions;

> selecting a first medical element from first medical element information;

> generating a first medical element impact parameter corresponding to a first impact of the first medical element on the medical clinical conclusion;

9

Application No. 09/815,646
Art Unit 3626

generating a first medical element confidence parameter corresponding to a first degree of confidence between the first medical element and the medical clinical conclusion;

generating a second impact parameter corresponding to a second impact of the first medical element on the medical clinical conclusion;

generating a second confidence parameter corresponding to a second degree of confidence of the first medical element on the medical clinical conclusion;

generating a first area ~~conclusion value~~ as a function of the first medical element confidence parameter and the first medical element impact parameter;

generating a second area ~~conclusion value~~ as a function of the second confidence parameter and the second impact parameter; and

determining the overall level of confidence for the selected medical conclusion as a ratio of the first area ~~conclusion value~~ and the second area ~~conclusion value~~, <u>wherein the second conclusion value is a best case scenario area for the medical clinical conclusion.</u>

Claim 20:  The method of claim 19, wherein the step of generating the first area ~~conclusion value~~ further comprises:

multiplying the first medical element impact parameter by the first medical element confidence parameter, and

wherein the step of generating the second area ~~conclusion value~~ further comprises:

multiplying the second impact parameter by the second confidence parameter.

Claim 21:  The method of claim 19, further comprising the steps of:

storing in a medical knowledge base a plurality of medical elements, medical conclusions, impact parameters and confidence parameters; and

generating the first medical element impact parameter, second impact parameter, first medical element confidence parameter and second confidence parameter for the selected medical element and medical conclusion using the medical knowledge base.

Claim 22 (amended):  The method of claim 19, wherein the first medical element is a patient medical element ~~and the first conclusion value is function of the patient medical element and the medical clinical conclusion, and~~

~~the second conclusion value is an optimum value, normal or best-case value corresponding to the medical clinical conclusion.~~

10

Application No. 09/815,646
Art Unit 3626

Claim 23 (newly added):  A method for determining an overall level of confidence of a conclusion comprising the steps of:

    a.  selecting at least one essential element from essential element data;

    b.  generating an impact parameter corresponding to a weight of the essential element pointing towards the conclusion;

    c.  generating a confidence parameter corresponding to a degree of relationship between the essential element and the conclusion;

    d.  generating a best-case impact parameter and a best-case confidence parameter as a function of the conclusion;

    e.  generating an essential element area as a function of the impact parameter and the confidence parameter;

    f.  generating a best-case scenario area as a function of the best-case impact parameter and best-case confidence parameter; and

    g.  generating the overall level of confidence of the conclusion as a ratio of the essential element area to the best-case scenario area.

Claim 24 (newly added): The method of claim 23, wherein step (e) further comprises determining the essential element area by multiplying the impact parameter by the confidence parameter, and

    wherein step (f) further comprises determining the best-case scenario area by multiplying the best-case impact parameter by the best-case confidence parameter.

Claim 25 (newly added): The method of claim 23, wherein the conclusion is a clinical conclusion.

Claim 26 (newly added): The method of claim 23, wherein the essential element data is patient data.

Claim 27 (newly added):  The method of claim 23, further comprising generating a report containing the overall level of confidence.

Claim 28 (newly added):  The method of claim 23, further comprising generating a graphical representation of the best-case scenario area and the medical essential element area.

11

Application No. 09/815,646
Art Unit 3626

Claim 29 (newly added): A method for determining an overall level of confidence of a conclusion comprising the steps of:

    a.  selecting at least one essential element from element data;

    b.  generating an impact parameter corresponding to a weight of the essential element pointing towards the conclusion;

    c.  generating a confidence parameter corresponding to a degree of relationship between the essential element and the conclusion;

    d.  generating an essential element area by multiplying the impact parameter by the confidence parameter; and

    e.  generating the overall level of confidence of the conclusion as a function of the essential element area.

Claim 30 (newly added): The method of claim 29, further comprising generating a best-case impact parameter and a best-case confidence parameter as a function of the conclusion.

Claim 31 (newly added): The method of claim 30, further comprising generating a best-case scenario area by multiplying the best-case impact parameter and best-case confidence parameter.

Claim 32 (newly added):   The method of claim 31, wherein step (e) further comprises generating the overall level of confidence as a ratio of the essential element area to the best-case scenario area.

Claim 33 (newly added): The method of claim 29, wherein the conclusion is a clinical conclusion.

12

Application No. 09/815,646
Art Unit 3626

Claim 34 (newly added): A method for determining an overall level of confidence of a conclusion comprising the steps of:
    a.  determining a number, N, of essential element data related to the conclusion;
    b.  determining at least one essential element from essential element data;
    c.  generating an impact parameter, $\iota$, corresponding to a weight of the essential element pointing toward the conclusion;
    d.  generating a confidence parameter, $\mu$, corresponding to a degree of relationship between the essential element and the conclusion; and
    e.  determining the overall level of confidence of the conclusion, M, wherein

$$M = \sum_{j=1}^{N} f(\mu_j, \iota_j).$$

Claim 35 (newly added):   The method of clam 34, wherein the function, $f(\mu_j, \iota_j)$, comprises a linear or non-linear function.

Claim 36 (newly added): The method of claim 35, wherein the conclusion is a clinical conclusion.

Claim 37 (newly added): A system for determining an overall level of confidence of a conclusion comprising:

    an essential element database storing essential element data;

    a rules database storing essential element impact parameters and confidence parameters wherein an impact parameter corresponds to a weight of the essential element pointing towards the conclusion and a confidence parameter corresponds to a degree of relationship between the essential element and the conclusion;

    a processor adapted to select an impact parameter and a confidence parameter from the rules database so that the impact parameter and confidence parameter correspond to the essential element and the conclusion; and

    a core engine adapted to calculate the overall level of confidence of the conclusion and comprising
        a best-case analysis unit performing a best-case analysis for the conclusion and generating a best-case area; and

        a conclusion analysis unit calculating the overall level of confidence using as a ratio of the product of the impact parameter and confidence parameter to the best-case area.

Claim 38 (newly added): The system of claim 37, wherein the conclusion is a clinical conclusion.

13

Application No. 09/815,646
Art Unit 3626

Claim 39 (newly added): The system of claim 37, further comprising:

a reporting unit adapted to report the overall level of confidence as the ratio of the essential element area and the best-case scenario area.

Claim 40 (newly added): The system of claim 37, further comprising a reporting unit adapted to generate a graphical representation of the essential element area and the best-case scenario area.

Claim 41 (newly added):  The method of claim 8, further comprising generating a report containing the overall level of confidence parameter.

Claim 42 (newly added):  The method of claim 8, further comprising generating a graphical representation of the first area and second area.

14